



Product Change Notification

Change Notification #: 118223 - 00
Change Title: Intel® Stratix® 10 Devices,
PCN 118223-00, Software,
SmartVID Firmware Updates for Intel
Quartus® Prime Pro v20.1, v20.2, v20.3,
v20.4
Date of Publication: April 22, 2021

Key Characteristics of the Change:

Software

Forecasted Key Milestones:

Milestone	Availability
Availability of Patches for Intel Quartus Prime Pro v20.1, v20.2, v20.3, v20.4	Now

Description of Change to the Customer:

This is the same change described in ADV2117 issued on April 16, 2021.

Intel is notifying customers of important updates related to the SmartVID Firmware affecting Intel Quartus® Prime Pro v20.1, v20.2, v20.3, v20.4.

In specific usage conditions, a firmware error directs the Voltage ID enabled voltage regulators (VR) to apply a voltage beyond the device recommended operating conditions for VCC and VCCP which may result in improper operation of the device. See Table 1 for the actions to take.

All the following conditions must be met to be impacted with this firmware error:

- Intel Stratix® 10 FPGAs with SmartVID enabled (-1V, -2V, -3V Ordering Part Numbers, see Products Affected section)
- Intel Quartus Prime Pro v20.1, v20.2, v20.3, v20.4
- FPGA is the master on PMBus.
 - Slave mode is not affected.
- VR using Direct Mode with m, b (non-zero value), R coefficient.
 - Linear Mode is not affected.
- Unit is in Volts (V).
 - Unit in Millivolts (mV) is not affected.

Table 1

Customer Design Version	Actions to Take
Intel Quartus Prime Pro v20.1, v20.2, v20.3, v20.4	<p>Download the patch from here: https://www.intel.com/content/altera-www/global/en_us/index/support/support-resources/knowledge-base/tools/2021/can-the-sdm-firmware-cause-an-external-voltage-regulator-to-appl.html</p> <p>If impacted based on the conditions listed above, please contact your local Intel Sales or Field Applications representative, or submit a support request at the My Intel support page via: https://www.intel.com/content/www/us/en/my-intel/fpga-sign-in.html</p>
Intel Quartus Prime Pro v19.4 and earlier	Not affected. No action necessary.
Intel Quartus Prime Pro v21.1 and newer	Error is corrected. No action necessary.

Customer Impact of Change and Recommended Action:

For more information or support, please contact your local Sales representative, or submit a request at the My Intel support page. Log-in via:

<https://www.intel.com/content/www/us/en/my-intel/fpga-sign-in.html>

Products Affected / Intel Ordering Codes:

All Intel Stratix 10 Devices with SmartVID enabled (--1V, -2V, -3V Ordering Part Numbers) used with the conditions listed in page 1.

The list of affected part numbers (OPNs) can be downloaded in Excel form:

<https://www.intel.com/content/dam/www/programmable/us/en/pdfs/literature/pcn/adv2117-opn-list.xlsx>

PCN Revision History:**Date of Revision:**

April 22, 2021

Revision Number:

00

Reason:

Originally Published PCN



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Should you have any issues with the timeline or content of this change, please contact the Intel Representative(s) for your geographic location listed below. No response from customers will be deemed as acceptance of the change and the change will be implemented pursuant to the key milestones set forth in this attached PCN.

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